

REMARKS

Claims 1-11 currently stand pending and not withdrawn. Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Richardson. As applied to the claims as amended, Applicant respectfully traverses the rejection.

Independent claim 1 has been amended to more clearly define, among other things, that surfaces of inlet vanes are curved along three dimensions. Applicant respectfully submits that this amendment does not introduce new matter. Please see, for example, FIG. 4A of the present application, as well as the equation defining a preferred vane surface shape in pending claim 3. Applicant further submits that Richardson fails to teach or suggest at least this feature.

As clearly shown in FIG. 3 of Richardson, for example, its vane surfaces are not curved in three dimensions, but instead are curved in only two dimensions. This is why FIG. 3 shows an edge when viewed from the top. By contrast, the inlet vanes defined in amended claim 1 are curved in three dimensions. Accordingly, when viewing from the top, as shown in FIG. 4A of the present application, two surface dimensions of the inlet vanes are clearly visible. For at least this reason, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Dependent claim 2 has been amended to more clearly define, among other things, a vane surface that is curved such that flow of the fluid along an entire surface of each of the inlet vanes is in an elliptical motion and in a substantially circular motion when viewed along the axial direction from the entrance of the vanes to the exit of the vanes. Applicant

respectfully submits that support for this amendment is found, for example, in the application figures depicting the inlet vanes, and in the equation for a preferred vane shape defined in claim 3. Applicant further submits that Richardson fails to teach or suggest at least this additional feature, as Richardson does not teach or suggest an inlet vane surface providing the defined substantially circular fluid flow viewed along the axial direction as defined.

Applicant further respectfully submits, regarding dependent claim 3, that Richardson clearly fails to teach or suggest inlet vanes having a surface shaped according to the equation defined in claim 3. Particularly, nothing in the specification of Richardson teaches or suggests inlet vanes shaped in this matter, and the figures fail to teach or suggest such a shape at least for the reason that the inlet vanes depicted in Richardson have a surface curved only in two dimensions, whereas the equation defined in claim 3 provides a surface that is curved in three dimensions. Further, the Office Action fails to specifically cite support for its general contention that the inlet vanes in Richardson are configured according to the equation in claim 3.

For at least these reasons, Applicant respectfully submits that claims 1-3, and additional dependent claims 4-10, are allowable over Richardson. Applicant thus requests reconsideration and withdrawal of the rejection.

Claims 1-6 are separately rejected under 35 U.S.C. § 102(b) as being anticipated by Johnson. As applied to the claims as amended, Applicant respectfully traverses the rejection.

Particularly, Johnson clearly fails to teach or suggest inlet vanes that have a surface curved in three dimensions. Instead, as clearly shown in FIGs. 1 and 3 of Johnson, the reference teaches inlet vanes 25 that are flat, projecting directly outward from inner member 24 to outer member 17. Though the vanes appear to have an airfoil shape as seen from the edge (see FIG. 1), the surface of the vanes are flat, thus are not curved in three dimensions as defined.

Additionally, due at least to the flat inlet vane surface, Johnson fails to teach or suggest at least the feature in amended claim 2 wherein the vane surface that is curved such that flow of the fluid along an entire surface of each of the inlet vanes is in an elliptical motion, and in a substantially circular motion when viewed along the axial direction from the entrance of the vanes to the exit of the vanes. Please see, for example, FIGs. 1 and 3 of Johnson. Further, though the Office Action states that the vanes in Johnson are “configured according to the equation in claim 3”, neither the description nor the figures in Johnson provide support for this statement.

Accordingly, Applicant respectfully submits that claims 1-3, as well as dependent claims 4-6, are also allowable over Johnson. Applicant thus respectfully requests reconsideration and withdrawal of the rejection, and allowance of claims 1-10.

The Examiner has indicated that claim 11 would be allowable if rewritten in independent form. Applicant acknowledges and appreciates this statement. At the present time, Applicant elects to keep claim 11 in its present form, pending the Examiner’s response to the amendments and remarks submitted herein.

For at least the foregoing reasons, Applicant believes that this case is in condition for allowance, which is respectfully requested. The Examiner should call Applicant's attorney if an interview would expedite prosecution.

Respectfully submitted,

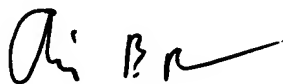
GREER, BURNS & CRAIN, LTD.

Customer No. 24978

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300 South Wacker Drive
Suite 2500
Chicago, IL 60606
Telephone: (312) 360-0080
Facsimile: (312) 360-9315
P:\DOCS\1201\68521\9P5787.DOC

By



Arik B. Ranson
Registration No. 47,954